



February 9, 2004

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Jim Barber, Section Chief
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**RE: Dunn Erwin Landfill, Harnett County, NC
C&D Cell Permit Extension Request
Permit # 43-02**

Fac/Perm/Co ID #	Date	Doc ID#
43-02	1	DIN: 25480

Mr. Barber:

As you are aware, Harnett County currently operates a C&D cell that is currently located on top of a closed MSW cell. The current permit (# 43-02) expired on January 1, 2004. We are requesting an extension of this permit at this time.

Per your request during the meeting with C. T. Clayton, Sr., P.E. in August 2003, we reviewed the records for the closure of the unlined solid waste landfill that is below the active C&D cell, and found that the 1997 cap installed had a minimum of 18-inches of soil with an average effective permeability of 1×10^{-5} cm/s. However, in some places the cap was constructed to a depth of 30-inches thick to compensate for permeability results that did not meet the 1×10^{-5} cm/s requirement.

Based on this finding and the proposed draft C&D Landfill Rules (specifically section .0543), the County is currently investigating options with C. T. Clayton to determine whether a synthetic cap or a compacted low permeability soil cap will be the best alternative for the closure of the C&D cell in the future. A letter addressing the closure plan for the C&D cell will follow in the near future.

Currently, based on a recent topographic survey completed in October 2003 of the C&D cell and the average waste inflow rates for the previous three years, enough air space is available to allow waste to be deposited in the cell until approximately August 2006.

Should you have questions concerning this request, please call me directly or C. T. Clayton at (252) 671-6979.

Sincerely,

Jerry Blanchard, Director
Harnett County Solid Waste Management

Attachment

cc: file, C. T. Clayton, Sr., P. E.



Dunn Erwin Landfill

C&D Cell

Estimated life Left

By: CTC Jr

CTC PN # 3023

1) Givens / Assumptions:

- a) 1000 lbs of C&D waste = 1 cu yd fill
- b) Daily Cover Soil Ratio: 8:1 = .125
- c) Topo Info (10/2003): 118,000 cu yd of air space available
(take into account a 2-ft closure cap)
- d) Average waste intake for 2001 to 2003
= 15,400 tons/year
x 1.15 (growth factor)
= 17,710 ton/year \Rightarrow 18,000 tons/year

2) Total Volume Used per year:

$$18,000 \text{ tons} = 36,000,000 \text{ lbs}$$

$$36,000,000 \text{ lbs} = 36,000 \text{ cu yds of C\&D}$$

$$36,000 \times 1.125 = 40,500 \text{ cu yds of C\&D and daily cover}$$

$$\text{Total Volume / yr} = 40,500 \text{ cu yds}$$

3) Time left before design grade (minus 2-ft cap) is met:

$$\text{Total Volume left: } 118,000$$

$$\text{Time Left: } 118,000 / 40,500 \text{ }^{10^3}\text{/yr}$$

$$= 2.9 \text{ yrs} = 34.8 \text{ months}$$

24 2003

SA 250,000 sf
COVER 18,518 cy
TOTAL 137,000 cy
FILL 118,482 cy

